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STATISTICAL SERVICE OF CYPRUS

INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) USAGE AND E-COMMERCE SURVEY IN ENTERPRISES 2024

SUMMARY RESULTS

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<u>C O N T E N T S</u>

INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) USAGE AND E-COMMERCE SURVEY IN ENTERPRISES 2024

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PREFACE

This report presents the results of the survey on Information and Communication Technologies (ICT) Usage and e-Commerce in Enterprises 2024. The aim of the survey is to collect data about the use of information and communication technologies by the enterprises, the access and use of the internet, e-commerce, ICT specialists and skills, ICT security and the use of Artificial Intelligence. The data are necessary for the implementation of policy programs of both the Government and the Private Sector.

The survey, which is co-funded by the European Union, conforms with the Commission implementing Regulation (EU) 2023/1507 of 20th July, 2023 laying down the technical specifications of data requirements for the topic 'ICT usage and e-commerce' for the reference year 2024, pursuant to Regulation (EU) 2019/2152 of the European Parliament and of the Council. The objective of this Regulation is to establish a common framework for the systematic production of Community statistics on the information society.

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A. SURVEY METHODOLOGY

The survey covers enterprises with 10 or more persons employed in the following statistical codes of economic activities under the classification system NACE Rev.2 (Detailed description in annex):

- C Manufacturing
- D Electricity, Gas, Steam and Air Conditioning Supply
- E Water Supply, Sewerage, Waste Management and Remediation Activities
- F Construction
- G Wholesale and Retail Trade; Repair of motor vehicles and motorcycles
- H Transport and Storage
- I Accommodation and Food Service Activities
- J Information and Communication
- L Real Estate Activities
- M Professional, Scientific and Technical Activities
- N Administrative and Support Service Activities
- S Other Service Activities

For the year 2024 all of the enterprises with 10 or more persons employed in all the Nace groups defined in the Regulation, were covered (census of enterprises). There were 32 NACE groups and 3 size groups, totaling approximately 4950 enterprises.

The 32 NACE groups (of economic activities) were the following: 10-12, 13-15, 16-18, 19, 20, 21, 22-23, 24-25, 26, 27, 28, 29-30, 31-33, 35, 36-39, 41-43, 45, 46, 47, 49-53, 55, 56, 58-60, 61, 62-63, 68, 69-71, 72, 73-75, 77-78+80-82, 79 ка 95.1. The 3 size groups were: Small enterprises (10-49 persons employed), Medium enterprises (50-249 persons employed) and Large enterprises (250+persons employed).

B. MAIN FINDINGS

ACCESS AND USE OF THE INTERNET

Almost all enterprises in Cyprus with 10 or more persons employed have access to the internet. In 2024, 99,2% of all enterprises had access to the internet compared to 98,7% in 2023. Over the last decade, internet access in Cyprus amongst enterprises with 10 or more persons employed has constantly been over 95% (Figure 1).



In 2024, all large enterprises (100%) have internet access. Medium and small enterprises follow with 99,8% and 99,1% respectively. This suggests that internet access is universal across all enterprises' sizes. For the first time in the last decade all small, medium and large enterprises have reached internet access over 99% (Figure 2).



The use of a fixed line connection to the internet (e.g., ADSL, SDSL, VDSL, fiber optics technology (FTTP), cable technology) has always been predominant among enterprises in Cyprus. Since 2015, more than 90,0% of enterprises with 10 or more persons employed used some type of fixed line connection to the internet. In 2024, 98,1% of enterprises had fixed broadband connection to the internet compared to 96,4% in 2023 (Figure 3).



In 2024, the most popular contracted download speed among enterprises in Cyprus was at least 100 Mbit/s but less than 500 Mbit/s (44,4% of all enterprises). The second most popular download speed was at least 1 Gbit/s (20,7%), followed by the enterprises with download speeds of at least 500 Mbit/s but less than 1 Gbit/s with 18,4% and of at least 30 Mbit/s but less than 100 Mbit/s with 12,3%. The least favourite download speed was the less than 30 Mbit/s with 2,3% (Figure 4).

Maximum contracted download speed of the fastest fixed line connection of the enterprise refers to the maximum theoretical speed according to the contractual obligations of the internet provider at which data can be downloaded.



Demand for high-speed internet connections has increased significantly over the last years. High speed internet connections (100 Mbit/s or more) are becoming more popular every year. Since 2015, demand for high-speed internet connections has risen from 1,0% in 2015 to 83,5% in 2024. On the other hand, demand for internet speeds of at least 30 Mbit/s have been dropping constantly from 88,2% in 2015 to 2,3% in 2024. Speeds of at least 30 Mbit/s but less than 100 Mbit/s, over the last decade have risen from 5.8% in 2015 to 37.2% in 2020, and then declined to 12.3% in 2024. This demonstrates a transition period where enterprises upgraded from lower to intermediate speeds before advancing to high-speed internet connections (Figure 5).



USE OF A MOBILE CONNECTION TO THE INTERNET FOR BUSINESS PURPOSES

In 2024, 84,1% of enterprises with 10 or more persons employed, provide portable devices that allow a mobile connection to the internet using mobile telephone networks, for business purposes. In small enterprises that percentage reached 82,3%, in medium 93,5% and in large 98,1%. By "providing portable devices that allow a mobile connection to the internet using mobile telephone networks, for business purposes," we mean devices that are provided by the enterprise and the subscription and usage costs of the devices are being paid either in full or at least up to a limit by the enterprise (Figure 6).

The number of the persons employed using portable devices is 28,7% in 2024. In absolute figures that is almost 58,000 persons employed with portable devices (Figure 6).



REMOTE ACCESS AND MEETINGS VIA THE INTERNET

With the term remote access, we refer to the enterprises' readiness, capacity and willingness to make it possible for their persons employed to work remotely, by giving them remote access to enterprise's resources (e.g. remote e-mail access, remote access to documents and ICT systems of the enterprise).

88,1% of all enterprises provide remote access to their e-mail system, 71,7% provide remote access to the enterprise's documents, including spreadsheets, presentations, or any other files and 66,3% provide remote access to enterprise's business applications or software used by the enterprise, such as application or software related to accounting, sales or other business software (Figure 7).

Almost all large enterprises (99,1%) allow remote access to the enterprise's e-mail system. Medium enterprises follow with 94,0% and small enterprises with 86,9%. Remote access to the documents of the enterprise drops from 91,5% in large enterprises to 82,8% in medium and 69,5% in small. The same pattern can also be observed in remote access to business applications or software of the enterprise. From 92,5% in large enterprises, to 79,4% in medium and 63,8% in small enterprises (Figure 7).

59,1% of all enterprises have conducted remote meetings via the internet (e.g., Skype, Zoom, MS teams, WebEx etc.). 95,3% of large enterprises have conducted remote meetings over the internet. In medium and small enterprises that percentage is 83,5% and 54,7% respectively (Figure 7).



Advertising over the internet

Advertising over the internet refers to paid advertisements by the enterprises in order to promote their goods and services. 49,4% of enterprises declared that they pay to advertise on the internet. 43,5% paid for advertisements based on the geolocation of the internet users, 38,4% of enterprises paid for targeted advertisements based on content or keywords searched by the internet users and 28,7% based on tracking of past activities and profile of the internet users (Figure 8).



E-COMMERCE

During 2023, 23,5% of the enterprises received orders via computer networks -web sites, apps or EDI (Electronic Data Interchange) type messages excluding manually typed e-mails. 22,7% of enterprises received orders via websites or "apps" and 2,5% via EDI (Electronic Data Interchange) type messages. The corresponding percentages for 2022 were 23,5%, 22,4% and 3,6% respectively (Figure 9).





WEB-SALES (VIA WEBSITES OR APPS)

Web-sales cover all orders, bookings and reservations placed by customers via websites or apps of the enterprise or via e-commerce marketplace websites or apps used by several enterprises for trading goods and services. 22,7% of all enterprises had web sales during 2023. One out of five small enterprises (20,4%) received orders via websites or apps during 2023. In medium size enterprises that percentage reached 33,2% and in large 51,9% (Figure 10).



17,1% of enterprises received orders for goods and services via the enterprise's own websites or apps while 14,2% received orders via e-commerce marketplace websites or apps used by several enterprises for trading products. For large enterprises that percentage reaches 49,1% and 28,3% respectively (Figure 11).



21,2% of enterprises received orders via websites or "apps" from private customers compared to 11,4% of enterprises which received orders from other businesses and/or from the government (Figure 12).



EDI-TYPE SALES

EDI-type sales refer to orders placed by customers via EDI-type messages (Electronic Data Interchange). During 2023, only 2,5% of all enterprises received orders via EDI-type messages. In large enterprises that percentage was 13,2%, in medium 7,3% and in small 1,6% (Figure 13).



ICT SPECIALISTS AND SKILLS

The information and communications technology (ICT) specialist, develops, designs, maintains, operates and services systems and applications that are used to store, retrieve, and send data.

27,5% of all enterprises employ ICT specialists. In large enterprises that percentage reaches 85,8%, in medium 49,6% and in small 22,8% (Figure 14).

The percentage of enterprises that provided any type of training during 2023, to develop ICT related skills to either ICT specialists or other persons employed, remains low at 15,3% and 27,0% respectively. In large enterprises the corresponding percentages are 59,4% (ICT specialists) and 78,3% (other persons employed) (Figure 14).

12,2% of enterprises recruited or tried to recruit ICT specialists in 2023. 6,4% of enterprises faced difficulties to fill the ICT specialist's vacancies during 2023 (Figure 14).



Over the years, recruitment of ICT specialists (or efforts to recruit ICT specialists) has fluctuated between 8,8% of all enterpises in 2017 and 12,2% in 2023. It is important to note that during 2021 and 2023 more than half of the enterprises that recruited or tried to recruit ICT specialists, declared that they faced difficulties to fill in their ICT specialist's vacancies (Figure 15).



The majority of the enterprises with difficulties to fill in their ICT specialists job vacancies during 2023, declared that the main reason was high salary expectations of the applicants (73,1%) followed by the applicants' lack of ICT related qualifications from education and/or training (72,6%), lack of applications was the third most popular reason (71,4%) and the applicants' lack of relevant work experience (68,4%) (Figure 16).



During 2023, the majority of enterprises used external suppliers to perform their ICT functions rather than using their own employees (resources). 84,5% of enterprises preferred external suppliers to perform ICT functions, such as maintenance of ICT infrastructure, support for office software, development and support of business management software/systems and web solutions and security and data protection. 40,9% of enterprises used their own employees or employees of parent or affiliated enterprises to perform such functions (Figure 17).

The percentage of enterprises using external suppliers remains constant over 75% in all enterprise size classes. The use of external suppliers during 2023 in small enterprises was 84,8%, in medium size enterprises was 84,2% and in large enterprises 77,4%. The use of own employees increases from 36,9% in small enterprises, to 59,8% in medium enterprises and to 93,4% in large enterprises (Figure 17).



ICT SECURITY

ICT security means measures, controls and procedures applied on enterprise's ICT systems to ensure integrity, authenticity, availability and confidentiality of enterprise's data and systems.

The most common measures applied by enterprises are: the usage of authentication via strong password, (95,0%), data backup to a separate location (including backup to the cloud) (90,0%), network access control (management of user rights in enterprise's network) (73,9%) and VPN (Virtual Private Network) (67,3%) (Figure 18).



96,4% of all enterprises declared that they apply at least one of the ICT security measures mentioned above, 56,4% apply at least 5 ICT security measures and 3,8% apply all ICT security measures (Figure 19).



46,6% of all enterprises make employees aware of their obligations in ICT security related issues with the use of voluntary training or internally available information (e.g. information on the intranet), 21,2% by contract and 20,0% by compulsory training courses or viewing compulsory material (Figure 20).

37,1% of all enterprises have document(s) on measures, practices or procedures on ICT security. 22,5% have revised the enterprise's document(s) on measures, practices or procedures on ICT security within the last 12 months (Figure 20).

The most common ICT related security incident in 2023, was unavailability of ICT services due to hardware or software failures (9,1%) followed by destruction or corruption of data due to hardware or software failures (3,5%) (Figure 20).



ARTIFICIAL INTELLIGENCE

Artificial Intelligence (AI) refers to systems that use technologies such as text mining, computer vision, speech recognition, natural language generation, machine learning, deep learning to gather and/or use data to predict, recommend or decide, with varying levels of autonomy, the best action to achieve specific goals.

Artificial intelligence systems can be software-based systems like chatbots and business virtual assistants, face recognition systems, speech recognition systems, machine translation software, or can be embedded in devices like autonomous robots for warehouse automation or production assembly works, autonomous drones for production surveillance or parcel handling, etc.

During 2024, in Cyprus 7,9% of all enterprises used some kind of Artificial Intelligence technologies. 34,9% of large size enterprises use AI, 14,3% of medium enterprises and 6,3% of small enterprises (Figure 21).

The adoption of AI technologies is growing steadily across enterprises of all sizes, with large enterprises leading the way. Large enterprises have the highest rate of AI adoption. In 2021, 13% of large enterprises used AI technologies, increasing to 15.5% in 2023 and to 34.9% in 2024. Medium-sized enterprises are adopting AI technologies slower, compared to larger ones. In 2021, 5.4% of medium

enterprises used AI, which increased to 9.4% in 2023 and to 14.3% in 2024. The adoption of AI technologies by small enterprises is relatively slow. In 2021, 1.9% of small enterprises used AI technologies, increasing to 3.7% in 2023 and to 6.3% in 2024 (Figure 21).



Annex Description of Economic Activity Codes included in the Survey (NACERev.2)

- C MANUFACTURING
- C10 MANUFACTURE OF FOOD PRODUCTS
- C11 MANUFACTURE OF BEVERAGES
- C12 MANUFACTURE OF TOBACCO PRODUCTS
- C13 MANUFACTURE OF TEXTILES
- C14 MANUFACTURE OF WEARING APPAREL
- C15 MANUFACTURE OF LEATHER AND RELATED PRODUCTS
- C16 MANUFACTURE OF WOOD AND OF PRODUCTS OF WOOD AND CORK, EXCEPT FURNITURE; MANUFACTURE OF ARTICLES OFSTRAW AND PLAITING MATERIALS
- C17 MANUFACTURE OF PAPER AND PAPER PRODUCTS
- C18 PRINTING AND REPRODUCTION OF RECORDED MEDIA
- C19 MANUFACTURE OF COKE AND REFINED PETROLEUM PRODUCTS
- C20 MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS
- C21 MANUFACTURE OF BASIC PHARMACEUTICAL PRODUCTS AND PHARMACEUTICAL PREPARATIONS
- C22 MANUFACTURE OF RUBBER AND PLASTIC PRODUCTS
- C23 MANUFACTURE OF OTHER NON- METALLIC MINERAL PRODUCTS
- C24 MANUFACTURE OF BASIC METALS
- C25 MANUFACTURE OF FABRICATED METAL PRODUCTS, EXCEPT MACHINERY AND EQUIPMENT
- C26 MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS
- C27 MANUFACTURE OF ELECTRICAL EQUIPMENT
- C28 MANUFACTURE OF MACHINERY AND EQUIPMENT N.E.C.
- C29 MANUFACTURE OF MOTOR VEHICLES, TRAILERS AND SEMI-TRAILERS
- C30 MANUFACTURE OF OTHER TRANSPORT EQUIPMENT
- C31 MANUFACTURE OF FURNITURE
- C32 OTHER MANUFACTURING
- C33 REPAIR AND INSTALLATION OF MACHINERY AND EQUIPMENT

D ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY

- D35 ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY
- E WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REMEDATION ACTIVITIES
- E36 WATER COLLECTION, TREATMENT AND SUPPLY
- E37 SEWERAGE
- E38 WASTE COLLECTION, TREATMENT AND DISPOSAL ACTIVITIES; MATERIALS RECOVERY
- E39 REMEDATION ACTIVITIES AND OTHER WASTE MANAGEMENT SERVICES

F CONSTRUCTION

- F41 CONSTRUCTION OF BUILDINGS
- F42 CIVIL ENGINEERING
- F43 SPECIALIZED CONSTRUCTION ACTIVITIES

G WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES

- G45 WHOLESALE AND RETAIL TRADE AND REPAIR OF MOTOR VEHICLES AND MOTORCYCLES
- G46 WHOLESALE TRADE, EXCEPT OF MOTOR VEHICLES AND MOTORCYCLES
- G47 RETAIL TRADE, EXCEPT OF MOTOR VEHICLES AND MOTORCYCLES

H TRANSPORT, STORAGE AND COMMUNICATION

- H49 LAND TRANSPORT AND TRANSPORT VIA PIPELINES
- H50 WATER TRANSPORT

- H51 AIR TRANSPORT
- H52 WAREHOUSING AND SUPPORT ACTIVITIES FOR TRANSPORTATION
- H53 POSTAL AND COURIER ACTIVITIES

I ACCOMODATION AND FOOD SERVICE ACTIVITIES

- I55 ACCOMODATION
- I56 FOOD AND BEVERAGE SERVICE ACTIVITIES

J INFORMATION AND COMMUNICATION

- J58 PUBLISHING ACTIVITIES
- J59 MOTION PICTURE, VIDEO AND TELEVISION PROGRAMME PRODUCTION, SOUND RECORDING AND MUSIC PUBLISHING
- J60 PROGRAMMING AND BROADCASTING ACTIVITIES
- J61 TELECOMMUNICATIONS
- J62 COMPUTER PROGRAMMING, CONSULTANCY AND RELATED ACTIVITIES
- J63 INFORMATION SERVICE ACTIVITIES

L REAL ESTATE ACTIVITIES

L68 REAL ESTATE ACTIVITIES

M PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES

- M69 LEGAL AND ACCOUNTING ACTIVITIES
- M70 ACTIVITIES OF HEAD OFFICES; MANAGEMENT CONSULTANCY ACTIVITIES
- M71 ARCHITECTURAL AND ENGINEERING ACTIVITIES; TECHNICAL TESTING AND ANALYSIS
- M72 SCIENTIFIC RESEARCH AND DEVELOPMENT
- M73 ADVERTISING AND MARKET RESEARCH
- M74 OTHER PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES
- M75 VETERINARY ACTIVITIES

N ADMINISTRATIVE ABD SUPPORT SERVICE ACTIVITIES

- N77 RENTAL AND LEASING ACTIVITIES
- N78 EMPLOYMENT ACTIVITIES
- N79 TRAVEL AGENCY, TOUR OPERATOR RESERVATION SERVICE AND RELATED ACTIVITIES
- N80 SECURITY AND INVESTIGATION ACTIVITIES
- N81 SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES
- N82 OFFICE ADMINISTRATIVE, OFFICE SUPPORT AND OTHER BUSINESS SUPPORT ACTIVITIES

S OTHER SERVICE ACTIVITIES

S951 REPAIR OF COMPUTERS AND PERSONAL AND COMMUNICATION EQUIPMENT